

REMARKS

By this reply, claims 1-2, 7 and 9 are pending in this application. Claim 1 is in independent form. Claim 1 is amended. Claims 3-5 were previously canceled. Claims 6, 8 and 10-11 are cancelled without any intent of prejudice to or disclaimer of the subject matter contained therein. Reconsideration and allowance of the present application are respectfully requested.

Rejections under 35 U.S.C. §112, Second Paragraph

Claim 10 stands rejected under 35 USC § 112, second paragraph, as being indefinite because it depends upon canceled claim 3.

Applicant cancels claim 10 for reasons unrelated to this rejection. Therefore, this rejection is now moot.

Rejections under 35 U.S.C. §102 - *Tamai*

Claims 1, 2, 7 and 9-11 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,248,144 (“*Tamai*”). Applicant cancels claims 10 and 11.

With regard to independent claim 1, Applicant moves the limitations of dependent claim 6 into claim 1. Therefore, Applicant asserts that the 35 U.S.C. §102 rejection of claim 1 is now moot. For at least the same reasons relating to dependent claim 2, 7 and 9-11, Applicant also asserts that the rejection of these claims is also moot. Therefore, Applicant respectfully requests that this rejection of claims 1, 2, 7 and 9 under 35 U.S.C. §102 be withdrawn.

Rejections Under 35 U.S.C. § 103 – Kaufman in view of Tamai

Claims 1, 2 and 6-11 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Publication No. 2002-0033382 (“Kaufman”) in view of Tamai. This rejection is respectfully traversed. Applicant cancels claims 6, 8, and 10-11.

With regard to independent claim 1, Applicant moves dependent claim 6 into claim 1. The Examiner asserts that Kaufman teaches all of the limitations of claim 6, with the exception that Kaufman does not teach the bulk density of the fumed silica and the processing conditions used to make the slurry.¹ The Examiner asserts that Tamai teaches the bulk density of fumed silica. The Examiner asserts that with respect to the process limitations, Applicant use process limitations to define the product and “product by process” claims do not patentably distinguish the product even though made by a different process.² Applicant asserts that a person of ordinary skill would not be motivated to combine the Kaufman and Tamai references.

With regard to the Kaufman reference, the Kaufman abstract indicates that the reference is a method for using a chemical mechanical polishing slurry to remove copper alloy, titanium, and titanium nitride containing layers from a substrate. At least paragraph [0018] of Kaufman states that the chemical mechanical polishing slurry is used to polish metal layers and “particularly copper or copper alloy containing layers”, in an integrated circuit. Paragraph [0025] of Tamai defines “copper” and “copper containing alloys” as pure copper, copper aluminum alloys, Ti/TiN/Cu, and Ta/TaN/Cu. A full review of Kaufman indicates that Kaufman is only teaching a chemical mechanical polishing slurry specific to the polishing of copper and copper containing alloys.

¹ See Page 3 of the October 10, 2007 Office Action.

² *Id.*

With regard to the Tamai reference, at least column 1, lines 1-8 disclose that Tamai teaches a polishing composition suitable for the planarization of semiconductor devices, and in particular the planarization of insulating layers. As described in at least column 7, lines 24-32, Tamai defines insulating layers as those layers classified according to film formation methods obtained by thermal oxidation, plasma oxidation, and insulating layers obtained by other methods. Applicant asserts that a person of ordinary skill in the art would therefore not be motivated to combine Kaufman's chemical mechanical polishing of copper and copper alloys with Tamai's planarization of insulating layers. Specifically, Applicant asserts that a composition for polishing metals is a distinctly different application than that of a composition used for the planarization of insulating layers. Therefore, a skilled artisan would not be motivated to combine these references.

For at least the reasons stated above related to independent claim 1, Applicant believes this claim to be patentable. For at least the same reasons related to dependent claims 2, 7 and 9, Applicant also believes these claims to be patentable. Therefore, Applicant respectfully requests that this rejection of claims 1, 2, 7 and 9 under 35 U.S.C. §103 be withdrawn.

Rejections Under 35 U.S.C. § 103 – Tamai in view of Kaufman

Claims 6 and 8 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Tamai in view of Kaufman. This rejection is respectfully traversed.

Applicant cancels claims 8 for reasons unrelated to this rejection. Applicant moves the claim limitations of dependent claim 6 into independent claim 1. For at least the reasons stated above related to the combination of Kaufman in view of Tamai as applied to amended claim 1,

Applicant asserts that a person of ordinary skill would not be motivated to combine Tamai with Kaufman.

For at least the reasons stated above related to independent claim 1, Applicant believes this claim to be patentable. Therefore, Applicant respectfully requests that this rejection under 35 U.S.C. §103 be withdrawn.

CONCLUSION

In view of the above remarks and amendments, Applicant respectfully submits that each of the rejections has been addressed and overcome, placing the present application in condition for allowance. A notice to that effect is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to contact the undersigned.

Pursuant to 37 C.F.R. §1.17 and 1.136(a), Applicant hereby petitions for a three (3) month extension of time for filing a reply to the outstanding Office Action and submit the required \$1050.00 extension fee herewith.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Donald J. Daley at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,
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By



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